

Title (en)

Multiple spindle rotary indexing machine tool.

Title (de)

Mehrspindelwerkzeugmaschinen mit Winkelteilung.

Title (fr)

Machine-outil à broches multiples à division angulaire.

Publication

EP 0046883 A2 19820310 (EN)

Application

EP 81105958 A 19810728

Priority

US 18221280 A 19800828

Abstract (en)

The multiple spindle machine tool system comprises a fixed base (10) and a central, upwardly projecting column (11). A worktable (12) is mounted on the base (10), for incremental, rotary indexing movements about the column (11) and carries a number of rotatable work-holding chucks or spindles (13), which are progressively indexable with the worktable from a loading station through a series of work positions. At each work position, a separate tool slider (14, 14a) is mounted on the column (11). At all of the work stations save the one next preceding the loading station, the several tool slides (14, 14a) are driven from a common motor (17), which is also utilized to effect rotation of the spindles (13) at all stations except the final work station, and also to index the worktable (12) through successive rotary increments after each machining step. One work station is provided with a tool slide (14a) with independent, numerically controlled motors (107 and 108) for X and Y axis movement, and a third independent motor (93) for spindle rotation.

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B23B 9/06

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CPC (source: EP US)

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Cited by

US4563925A; EP0242870A3; AU775352B2; EP0133456A3; US5261148A; US6421895B2; US6263553B1; US6219895B1; US6694849B1; WO0100358A1; WO0100359A1

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